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Notice of Allowability	Application No.	Applicant(s)	
	09/467,364	XU ET AL.	
	Examiner	Art Unit	
	Thai D Hoang	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/26/2004.
2. ☒ The allowed claim(s) is/are 7,2-3,6,8-10,17,12-13,16,18-21,33-38 have been renumbered as 1-42 respectively.
3. ☒ The drawings filed on 20 December 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>7/26/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David J. Thibodeau, Jr. on Thursday, October 14, 2004.

The statements "assumed to be" recited in the original claims 7 (lines 4-5), 17 (line 5), 21 (line 5), 29 (lines 8-9), 39 (line 5) and 46 (line 5) have been deleted.

Allowable Subject Matter

Claims 7, 2-3, 6, 8-10, 17, 12-13, 16, 18-21, 33-38, have been renumbered as 1-42 respectively.

Claims 1-42 are allowed.

The following is an examiner's statement of reasons for allowance:

McGowan et al., US Patent No. 5,937,345 disclose a Method and apparatus for intercepting calls in a communications system. McGowan does not teach or fairly suggest the following features, which are recited in independent claims of the present application:

(a) A method for processing network layer messages within a wireless communication system, the network layer including within it certain functional layers, including a radio resource function, a mobility management function, and

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a connection management function with at least the radio resource function being normally a transport mechanism for the mobility management and connection management functions, the method comprising the steps of:

examining a network layer message traveling in an uplink direction from a mobile station towards network subsystem components to determine, prior to routing it to any functional layer, whether it is associated with connection management mobility management, or radio resource management;

routing the message directly to the respective connection management, mobility management, or radio resource management functional layer, without passing the message through each of the functional layers; and

processing downlink network layer messages traveling: in a downlink direction from network subsystem components towards the mobile station in a direct manner such that the network layer messages do not pass through other layer protocol stacks, the downlink network layer messages that comprise connection management messages are being first routed to the mobility management function as recited in claims 1 and 8.

(b) Claims 15-21 are allowed for reasons given in the previous action.

(c) A wireless communications system with messaging and other functionalities defined by a layered protocol, the system comprising:

a physical layer;

a data link layer that packages data from the physical layer for routing;

a network layer that routes a message containing the packaged data from the data link layer to a recipient the network layer including within it certain

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functional layers, including a radio resource function, a mobility management function, and a connection management function with at least the radio resource function being normally a transport mechanism for the mobility management and connection management functions;

a means for examining a network layer message traveling in an uplink direction from a mobile station towards network subsystem components to determine, prior to routing it to any functional layer, whether it is associated with connection management mobility management, or radio resource management;

a means for routing the message directly to the respective connection management, mobility management, or radio resource management functional layer, without passing the message through each of the functional layers; and

a means for processing downlink network layer messages traveling: in a downlink direction from network subsystem components towards the mobile station in a direct manner such that the network layer messages do not pass through other layer protocol stacks, the downlink network layer messages that comprise connection management messages are being first routed to the mobility management function as recited in claim 22.

(d) A method for processing network layer messages within a wireless communication system using a multiplexer function, the network layer including within it certain functional layers, including a radio resource function, a mobility management function, and a connection management function with at least the radio resource function being normally a transport mechanism for the mobility

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management and connection management functions with a data link layer, the method comprising the steps of:

routing network layer messages to said radio resource functional layer using a first interface;

routing network layer messages to said mobility management functional layer using a second interface;

routing network layer messages to said connection management functional layer using a third interface;

routing network layer messages from said data link layer using a fourth interface; and

examining a network message to determine, prior to routing it to any functional layer, whether it is associated with connection management, mobility management, or radio resource management and routing the message directly to the respective connection management, mobility management, or radio resource management functional layer, without passing the message through each of the functional layers as recited in claims 29 and 36.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is


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(571) 272-3184. The examiner can normally be reached on Monday-Friday 10:00am-18:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang


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TECHNOLOGY CENTER 2600 00/18/04